# U.S. Jobs Supported by Exports of Goods and Services

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## U.S. Jobs Supported by Exports of Goods and Services

## **Report Highlights**

U.S. exports continue to be a vital source of U.S. economic and employment growth and of high wages.

Jobs supported by exports of goods and services increased sharply in 1994, after growing slowly in 1992 and 1993 in response to the slowdown and recession in foreign economic growth and other factors. The 1994 jobs increase reflected primarily the improved competitiveness of U.S. goods exports.

- In 1994, U.S. jobs supported by exports reached a record 10.3 million, up from 6.3 million in 1986. Goods exports supported 6.8 million jobs and services exports supported 3.5 million jobs.
- Firms that export have higher productivity growth than firms that do not export. This higher productivity growth is important because it contributes to their increased competitiveness and enables them to pay their workers higher wages. The level of productivity of workers in jobs producing goods and services that were supported by exports exceeded the national average for private business by 13 percent, and their productivity growth rate over the period 1986 and 1994 was nearly three times the national average in the overall private business sector.
- Higher productivity growth is a key to being able to pay higher wages. In 1994, the wages of all production and related workers in jobs supported by goods exports were 13 percent higher than the national average, and the wages of workers in jobs supported directly by those exports were 20 percent higher.
- The U.S. high-technology industries continue to be a leading export sector. In 1994, their exports supported 2.0 million jobs directly in their own industries and indirectly in other goods and services industries.
- In 1994, increased goods exports to most of our trading partners supported increases in the number of jobs they support. The number supported by goods exports to our NAFTA partners reached 2.2 million U.S. jobs, nearly double the number in 1986, and accounted for one-third of the total supported by goods exports in 1994. In contrast, the number supported by goods exports to the European Union decreased each year between 1991 and 1994.

## **Background to This Report**

The impact on employment is one of the key economic indicators that help policy officials and researchers understand the dynamic impacts of changes in the operation of the U.S. economy. Employment changes are particularly important to understanding the impact of the increasing integration of the U.S. economy with our major foreign markets. That impact is reflected in the highly visible increasing dependence of the jobs of U.S. workers and their wages on U.S. exports.

This contribution of exports to the U.S. economy and employment is highly visible in terms of the number of workers whose jobs are supported by exports. One out of every 10 workers in the U.S. business sector is supported by the sale of U.S.-produced goods and services in foreign markets. This contribution is even more important to employment in the U.S. manufacturing sector where one out of every five workers' jobs depend on exports.

This contribution also is highly visible when compared with the number of workers in key states. For example, jobs supported by exports are one and one-half times the total employment of the six New England states, or about equal to the total employment of Illinois and Ohio -- the two largest Midwest employers. Moreover, the number of jobs in manufacturing industries that are supported by exports equal the total number of jobs in manufacturing in New England plus New York, New Jersey, and Pennsylvania.

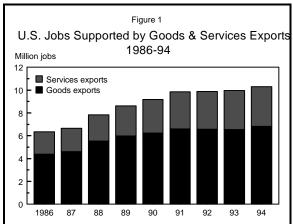
This report on jobs supported by exports is the sixth in a series published by the Department since 1983. It summarizes key data on the contribution of exports of goods and services to U.S. employment and wages through 1994. Because exports of goods produced by high-technology industries are one of the fastest growing export sectors, this report provides a more detailed coverage of jobs supported by exports in those industries than in earlier reports. This report significantly revises data published in the earlier reports. (See Appendix A for additional data.)

An accounting approach is used to estimate the <u>actual</u> number of those jobs supported each year by goods and business services exports. The data cover jobs supported <u>directly</u> in businesses producing the goods and services that are exported and the jobs <u>indirectly</u> required to produce those exports, including jobs upstream in the production process to produce inputs of goods and services and capital goods and jobs required downstream to move the exported products from their place of production to the port of exportation. (See Appendix B for a detailed description of the methodology used to produce these estimates.)

## **Record Number of Jobs Supported by 1994 Exports**

In 1994, the total number of jobs supported by U.S. exports of goods and services reached a record 10.3 million, up by two-thirds from the 6.3 million supported by exports in 1986 (Figure 1). A preliminary estimate indicates that total reached a new high of 11 million jobs in 1995. 1986 is the first year for which the estimated number of jobs supported by services exports are available.

- Goods exports supported a record total of 7.3 million jobs in 1994, up from 4.4 million jobs in 1986. These data include jobs in industries producing the goods exports and those in services industries they indirectly support.
- Private business services exports supported a total of 3.7 million jobs in 1994, up from 2.0 million in 1986.



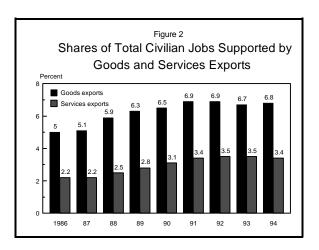
## Large Growing Share of U.S. Employment

Over the last decade, exports of goods and services have contributed a far larger share of the growth in total U.S. employment than is reflected in their rising annual share of the total. Between 1986 and 1994, exports-supported jobs accounted for 31 percent of the rise in total employment. In particular, between 1986 and 1991, the number of jobs supported by exports rose faster between 1986 and 1991 than employment supported by output to meet domestic demand, and thus the share of total employment supported by exports rose from 7.2 percent to

10.3 percent during that period. Thereafter, with strong domestic economic recovery and strong export growth, the share remained at slightly over 10 percent and was 10.2 percent in 1994.

This pattern is reflected in the separate share trends for exports of goods and exports of services, with the shares in 1994 for jobs supported by goods exports at 6.8 percent and the share for services exports at 3.4 percent (Figure 2).

The share of the total number of jobs in



each sector that was supported directly and indirectly by exports of goods and services in 1994 is as follows:

| All civilian jobs                   | 1 in 10 |
|-------------------------------------|---------|
| In all goods producing sectors      | 1 in 5  |
| In manufacturing                    | 1 in 5  |
| In agriculture                      | 1 in 3  |
| In other goods producing industries | 1 in 7  |
| In services producing industries    | 1 in 14 |

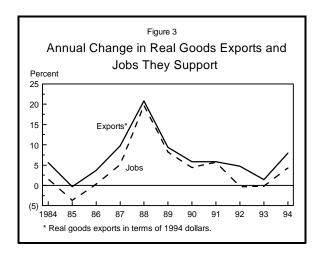
#### **Recent Cyclical Changes**

The strong growth in employment contributed by exports between 1985 and 1991 stalled in 1992 and 1993. Employment gains from goods exports started rising again in 1994 and estimates for 1995 suggest further strong increases. Employment gains in 1993 and 1994 from services exports were small.

The 1992-93 halt in jobs growth mainly reflects the slowdown or recession in domestic demand in key U.S. export markets and the effect of U.S. productivity growth. The 1994 recovery appears to reflect an improved U.S. export competitiveness, including improved price competitiveness due to dollar devaluation, and a slowly improving recovery in some foreign markets.

The largest negative impact of these factors in 1992 and 1993 appears to have been on jobs supported by exports of high-technology manufacturing industries.

- The real (volume) growth in total goods exports reached a low in 1993 and recovered sharply in 1994 (Figure 3). Almost all of the 1993 decrease was accounted for by
  - exports of the high-technology industries, which decreased in level in 1993 by 1.9 percent, while exports of other manufacturing industries continued to rise by 6.2 percent. The exports of both manufacturing groups rose in 1994 by 8.2 and 8.4 percent, respectively.
- In 1992 and 1993, a reduction in jobs supported by exports of the high-technology industries was largely offset by the continued rise in jobs supported by exports of other manufacturing

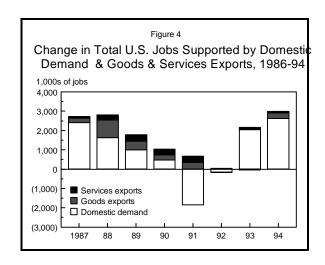


industries. •

In 1994, jobs supported by exports of both groups of manufactures increased.

The continued strength of exports in times of U.S. domestic slow-down in growth or

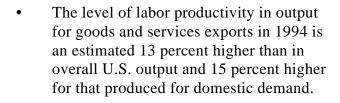
even recession has provided a greater than proportionate offset to an otherwise decrease in U.S. jobs supported by U.S. domestic demand. Between 1986 and 1994, exports contributed 32 percent of the increase in total employment. Exports were particularly important in offsetting the 1991 and 1992 decrease in jobs supported by output to domestic demand and in 1991 when they added over nearly 700,000 jobs while those supported by domestic demand dropped by 1.8 million (Figure 4). With the strong U.S. domestic economic recovery in 1994, the 1994 surge in exports-supported jobs contributed one-eighth of the growth in the total.

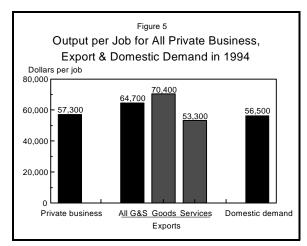


## **Productivity Growth Advantage of Jobs Supported by Exports**

High productivity in the output of goods and services embodied in exports has made a very important contribution to the competitiveness of U.S. firms' output and export growth. It also is a key distinguishing factor between the firms that export and other U.S. firms. Productivity growth is particularly important for U.S. workers because it provides the basis for supporting higher wages paid workers in jobs supported by exports than paid workers in other jobs.

The <u>level</u> of productivity measured, in terms of output per worker, is substantially higher for workers in jobs supported directly and indirectly by exports than the average productivity of all workers in private business, and is particularly higher than the productivity of workers supported by output of goods and services supported by only domestic demand (Figure 5).<sup>1</sup>





- For exports, as for all U.S. business output, productivity is much higher in the output of goods than in the output of services. In 1994, productivity in the output of goods exports was 9 percent higher than for all goods and services exports and 32 percent higher than for only services exports. Moreover, the productivity of goods exports was 23 percent higher than for all business sector output of goods and services.
- In contrast to the output supported by goods exports, productivity in the output of goods and services supported by <u>services</u> exports was 7 percent below that average for all business sector output.

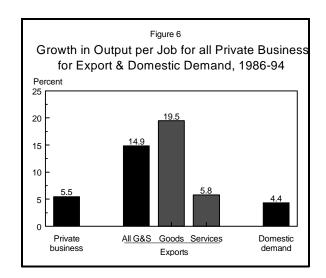
There are two main reasons why the productivity level of output supported by exports is higher than the productivity level of output supported by domestic demand. First, exports are more concentrated in industries with higher productivity levels. Second, as reported in other

<sup>&</sup>lt;sup>1</sup> Productivity for this purpose is measured in terms of full-time-equivalent jobs and real output valued in 1994 dollars.

U.S. Department of Commerce studies, productivity in firms that export are higher than in firms in the same industry that do not export.<sup>2</sup>

The higher productivity growth rate in output supported by exports is equally as important as its higher level in output of exports.

- Between 1986 and 1994, productivity growth in U.S. output of goods and services supported by goods exports rose by 15 percent -- nearly three times more rapidly than the 5.5 percent average productivity growth of the overall U.S. business sector and over three times the 4.4 percent rate for only output to domestic demand (figure 6).
- Moreover, the productivity growth in output in goods and services supported by goods exports was over twice that in the output supported by services exports and over twice that of the national average.



Productivity growth in manufactures exports is substantially higher than in output of manufactures for domestic demand. Between 1986 and 1994, productivity in manufactures exports rose by 29 percent, compared with 25 percent for the overall U.S. manufacturing sector. As the 25 percent productivity growth in all manufacturing includes the higher than average 29 percent productivity growth in manufactured exports, the productivity growth in output for domestic demand is therefore lower than the overall 25 percent average growth.

<sup>&</sup>lt;sup>2</sup> Lewis Alexander, Office of the Chief Economist, Economics and Statistics Administration, U.S. Department of Commerce, *Technology, Economic Growth and Employment: New Research from the Department of Commerce*, December 1994.

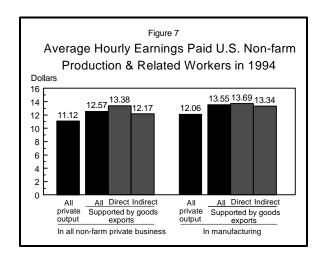
## The Wage Advantage--Goods Exports Support Higher Paying Jobs

Higher productivity levels and productivity growth not only contribute to the increased competitiveness of U.S. firms that export, they also enable those firms to pay higher wage rates in jobs supported by exports. The average wages paid workers in jobs supported by goods exports are significantly higher wages than the national average. Moreover, the wages paid workers in jobs supported by the high-technology manufacturing industries are substantially higher than the average supported by all goods exports.

### Wages Supported by All Goods Exports

In 1994, the average hourly earnings paid non-farm workers in jobs <u>directly</u> and <u>indirectly</u> supported by all U.S. goods exports averaged \$12.57 -- 13 percent higher than the national average of \$11.12 paid all non-farm workers in private business (Figure 7). This is the same degree of wage advantage as previously reported for jobs in 1992.

 Workers in jobs <u>directly</u> supported by goods exports--jobs in the industries producing the actual exported products-averaged hourly earnings 20 percent higher than the national average.



• Workers in <u>manufacturing</u> industries' jobs supported directly and indirectly by goods exports averaged hourly earnings of \$13.55 -- 12 percent higher than the \$12.06 paid all workers in those industries.

#### Wages Supported by High-Technology Industries' Exports

The higher educational and skill levels required and other factors required by U.S. firms in <u>high-technology industries</u> to produce their exports enable them to pay higher wages than the average paid in other industries.

• In 1994, workers in all jobs supported by the high-technology manufacturing industries' exports directly in their own industries and indirectly in other industries averaged hourly earnings of \$13.09 -- 18 percent higher than the \$11.12 paid all non-farm workers.

|  | 8 |  |
|--|---|--|

Workers in jobs supported directly in high-technology industries by their own exports averaged hourly earnings of \$14.90 -- 34 percent higher than the national average.

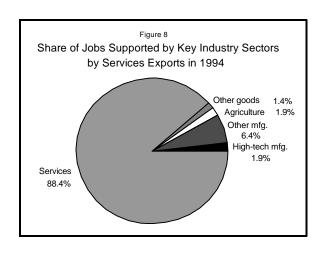
## **Key Employing Industries**

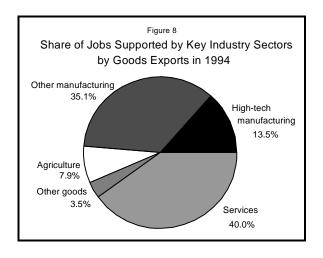
As in the overall U.S. economy, the services sector accounts for the largest share of all jobs supported directly and indirectly by goods and services exports -- 56 percent in 1994. As can also be expected, the service sector also accounts for the dominant share -- 88 percent -- of the jobs supported by services exports (Figure 8).

In contrast, the goods-producing sector accounts for marginally the largest share of all jobs supported by goods exports -- 60 percent of the total in 1994 (Figure 9). The manufactured goods industries supplied -- 49 percent of the total, with over one-fourth of that share in high-technology industries. Agricultural industries account for only 8 percent and other industries for only 3 percent of the total supported by goods exports. Service industries accounted for a very large share -- 40 percent -- of the total jobs supported by goods exports. A detailed list of the jobs supported in each industry is provided in Appendix A.

#### **Jobs Supported by Goods Exports**

The ten industries with the highest number of jobs supported directly and indirectly by goods exports in 1994, in decreasing importance, are:





|   | 1,000s of Jobs |
|---|----------------|
| Wholesaling                               | 938            |
| Trucking                                  | 241            |
| Aircraft, engines & parts                 | 228            |
| Solid state & other electronic components | 172            |
| Motor vehicles. equipment & parts         | 172            |
| Printing and publishing                   | 137            |
| Financial services                        | 132            |
| Electronic computing equipment            | 129            |
| Grains                                    | 119            |
| Machine tools and dies                    | 94             |

These ten industries accounted for one-third of the total number of jobs supported by goods exports in 1994. The jobs in the goods-producing industries include jobs supported directly by their own exports and indirectly by the exports of other goods producing industries. Those in the services-producing industries are supported only indirectly by the exports of the goods producing industries.

#### **Jobs Supported by Services Exports**

The six industries with the highest number of jobs supported by business services exports, in decreasing importance, are:

|   | 1,000s of Jol | <u>os</u> |
|---|---------------|-----------|
| Hotels, motels, personal, & repair        |               | 618       |
| Miscellaneous business & professional ser | vices .       | 478       |
| Restaurants and bars                      |               | 471       |
| Financial services                        |               | 210       |
| Air transportation                        |               | 171       |
| Local transportation services             |               | 133       |

The jobs in these six industries account for nearly two-thirds of the total supported directly and indirectly by services exports. A major share of these services exports are actually provided to foreign tourists traveling in the United States.

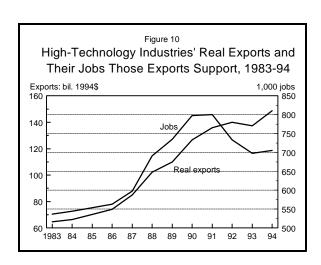
## **Jobs in High-Technology Industries**

High-technology industries generally have outpaced other industries in the growth of exports, employment and wages. They also are a key source of technology innovations in products and of productivity improvements.<sup>3</sup> Over the entire period 1983-94, high-technology industries' real exports rose significantly more rapidly than those of other goods industries. This high export growth rate, combined with high productivity growth, has enabled the high-technology industries to pay their workers higher wages than the average in other industries.

In 1994, all goods and services industries' exports supported 926,000 jobs supported directly and indirectly in high-technology industries. Of this total, 705,000 jobs were supported directly by the high technology industries' own exports and 220,000 jobs were supported by other industries' exports. However, the high-technology industries exports indirectly support a far larger number of jobs in other industries than they directly supported in their own industries. In 1994, the high-technology industries' own exports supported a total of nearly 2.0 million jobs -- the 705,000 jobs directly supported in their own industries and 1.3 million jobs supported indirectly in other industries.

#### **Cyclical and Productivity Effects**

Growth in jobs in the high-technology industries that were supported by exports has varied widely because of major shifts in the growth rates of their own exports and in the productivity of their output. Over the entire period 1983-94, their export growth was significantly affected by the cyclical swings in demand among major U.S. markets, and shifts in productivity rates in these industries. The shifts in these rates are particularly pronounced over the three periods: 1983-86, 1986-91, and 1991-94 (Figure 10).



<sup>&</sup>lt;sup>3</sup> The definition of high-technology industries is based on industry, rather than product, measures of technology at the 4-digit SIC level of aggregation (see Appendix B). The discussion in the text is in terms of individual high-technology industries at a somewhat greater aggregation level than the 4-digit SIC level.

Employment supported by high-technology industries' exports remained virtually unchanged between 1983 and 1986, increased by 42 percent between 1986 and 1991, and actually decreased by 12 percent between 1991 and 1994.

- In 1986-91, a surge in productivity was more than offset by a surge in export volume growth; however, in 1991-94, slower export growth was more than offset by the continued high productivity growth (Table 1). Thus, in 1991-94, slower export volume growth was the principal factor contributing to the decrease in total jobs.
- Export volume, after a relatively slow 15 percent growth between 1983 and 1986, jumped by 83 percent between 1986 and 1991, and then slowed again to a 9 percent increase between 1991 and 1994.
- In contrast, <u>labor productivity</u> in these industries (in terms of output per job) in support of their own exports jumped from 9 percent over the first period, to 29 percent in the second, and 24 percent in the third.

Table 1
Sources of Change in Total Number of Jobs Supported in High-Technology Industries by Their Own Exports
(In percentage points change)

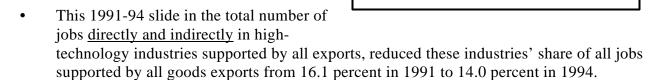
|           | Total<br>jobs | Real exports (1994\$) | Productivity growth* | Other factors |
|-----------|---------------|-----------------------|----------------------|---------------|
| 1983-86 . | +4.8          | +14.6                 | -9.4                 | -0.4          |
| 1986-91 . | +42.3         | +83.2                 | -28.8                | -12.1         |
| 1991-94 . | -11.9         | +9.4                  | -24.1                | +2.8          |

<sup>\*</sup> In terms of real exports per job. Signs are reversed to show contribution to changes in jobs.

Virtually all of the 1983-91 growth and 1991-94 decrease in jobs supported by exports in high-technology industries were in jobs directly supported by their own exports, rather than in the jobs supported indirectly by exports of other industries (Figure 11).

• The total number of jobs supported in high-technology industries by their own and other goods exports rose from 733,000 in 1983 to their 1991 peak of 1.1 million in 1991, and then dropped by 13 percent to 926,000 in 1994.

- Most of the decrease was in jobs <u>directly</u> <u>supported</u> in the high-technology industries by their own exports -- a 12 percent decrease from 800,000 in 1991 to 705,000 in 1994.
- Jobs <u>indirectly supported</u> in the high technology industries by exports of other industries dropped by 16 percent from 263,000 at their 1991 peak to 220,000 in 1994.



800

700

600

500

400

300

200

100

85 86 87 88

#### Concentration of Job Growth Slow-down Across High-Technology Industries

The post-1991 slowdown in the growth rate of all jobs in high-technology industries supported by <u>all goods exports</u> and the actual decrease in those jobs was largely due to the decline in jobs in three industry groups: electronic components, computing equipment, and aircraft engines, parts and equipment.

Between 1991 and 1994, the jobs in high-technology industries supported by all goods exports decreased by 138,000 -- almost all in these three industries. That decrease occurred in both jobs supported directly by their own exports and in jobs supported indirectly by the exports of other goods-producing industries (Figure 12). The extent that key factors contributed to the decline varied widely across the three industries.

- The largest decrease was in jobs in the <u>aircraft group</u>. Most of the decrease in the aircraft industry was due to a decline in jobs supported directly by it own exports, which were 34 percent lower in volume in 1994 than in 1991.
- Most of the 1991-94 decrease in jobs supported by all goods exports in the <u>electronic component industry</u> appears attributable to high productivity growth,

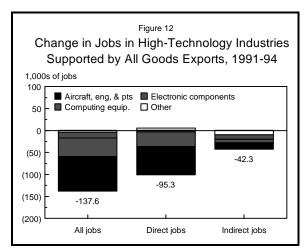


Figure 11

Directly supported

Jobs in High-Technology Industries Supported Directly & Indirectly by Goods Exports, 1983-94

Indirectly supported by other industries

90 91 92

as its own real exports continued to rise strongly, and to jobs supported indirectly by exports of other industries.

• The decrease in jobs supported by exports in the <u>computing equipment industry</u> appears attributable to both strong productivity growth and other negative factors, as export volume rose sharply.

#### **Productivity Growth in Individual High-Technology Industries**

Over the entire 1983-94 period, productivity growth in the high-technology industries' production of exports was over 50 percent higher than in other manufacturing industries' exports. Thus, their real exports would have had to rise that much faster to obtain the same growth in jobs. Productivity growth in the production of exports was particularly high in three key high-technology industries over 1983-94 (in terms of annual average growth rate of labor productivity):

|                             | Average annual |
|-----------------------------|----------------|
|                             | growth rate    |
| Solid state semi-conductors | 11.7%          |
| Other electronic components | 8.2%           |
| Computing equipment         | 7.3%           |

These three industries also are among the high technology industries with the largest number of jobs supported by exports in 1994.

#### **Employment Performance in Individual High-Technology Industries**

The number of jobs supported by goods exports in individual industries varied widely depending mainly on the extent they depend directly on their own or indirectly on other industries' exports, and differences in export volume and industry productivity levels. In 1994, the <u>computer industry</u> led high-technology industries in employment supported <u>directly</u> and <u>indirectly</u> by the exports. The ten leading employing industries in rank order are:

| (1                          | ,000s of jo | bs)                             |      |
|-----------------------------|-------------|---------------------------------|------|
| Computing eq.               | 128.9       | Other non-elec. measuring inst. | 59.3 |
| Aircraft                    | 111.7       | Aircraft & missile engines      | 55.7 |
| Solid state semi-conductors | 93.2        | Medical instruments             | 33.5 |
| Other electronic components | 83.9        | Industrial inorganic chemicals  | 32.0 |
| Other aircraft parts & eq.  | 73.7        | Telephone & telegraph eq.       | 28.2 |

The industries with the largest number of jobs supported by exports were not necessarily the same as those with the highest growth rate in those jobs largely because of higher than average productivity growth rates. The ten industries that led in rate of growth in jobs supported by exports over 1983-94 in rank order are:

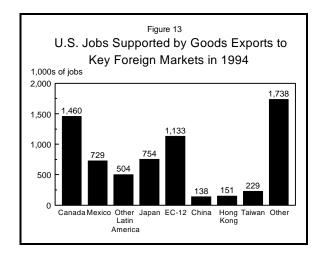
#### (percent increase)

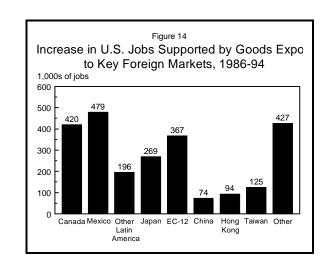
| Radio & TV sets & broadcast eq. | +316 | Drugs & medicines         | +47 |
|---------------------------------|------|---------------------------|-----|
| Telephone & telegraph eq.       | +137 | Communications eq.        | +47 |
| Plastics, synthetic resins      | +99  | Optical instruments       | +46 |
| Watches & clocks                | +62  | Other aircraft pts. & eq. | +39 |
| Ophthalmic goods                | +58  | Aircraft                  | +37 |

Although the jobs supported by all goods exports in the above two aircraft industries were higher in 1994 than 1983, their number and that in most other high technology industries were lower in 1994 than 1991. Industries with the largest proportionate 1991-94 decreases included office and accounting equipment, aircraft, and electronic computing equipment. Moreover, the jobs supported in three industries were lower in 1994 than in 1983: ordnance & accessories, photographic equipment, and computing equipment.

## **Key Foreign Markets**

In 1994, three key nations continued to lead in the number of U.S. jobs supported by goods exports -- Canada, Japan and Mexico, with Mexico and Japan virtually tied for second place (Figure 13). All major markets supported a much larger number in 1994 than in 1986 (Figure 14). Between 1991 and 1994, jobs supported by goods exports to Canada, Mexico, other Latin American countries, and key Asian markets have continued to rise; however, the number supported by exports to Japan, the European Union and all other markets edged





down.

U.S. goods exports to our two NAFTA partners in 1994 (the first year under the free-trade agreement) supported 2.2 million U.S. jobs -- one-third of the total for all foreign markets.

Between 1986 and 1994, goods exports to <u>Mexico</u> supported by far the largest single increase in jobs supported by exports to all foreign markets -- rising from 250,000 to 729,000 in number and by nearly 200 percent (Table 2).

- The increase supported by the Mexican market accounted for over one-third of the increase in jobs supported by exports to all foreign markets.
- That increase exceeded the increases for exports to Canada (our largest export market) and that for exports to the entire European Union. Moreover, the percentage increase for exports to Mexico was four times those for exports to Canada, Japan, and most other developed countries.

• The 1995 decrease in exports to Mexico undoubtedly cut into the total number of jobs they support, but the provisions of the NAFTA helped minimize that reduction. These provisions prevented Mexico in 1995 from greatly increasing its barriers to imports from the United States, as it did in the early 1980s and which greatly reduced its imports of U.S. goods and the number of U.S. jobs they supported.

Table 2
Increase in Jobs Supported by Goods Exports to Major Foreign Markets,
1986-94

(1,000 full-time-equivalent jobs; and percent increase)

| Increase in         |               |         |
|---------------------|---------------|---------|
| Foreign market      | <u>1,000s</u> | Percent |
| All markets         | +2,451        | +56%    |
|                     | ,             | T30 /0  |
| Canada              | 420           | +40     |
| Mexico              | 479           | +192    |
| Other Latin America | 196           | +64     |
| Japan               | 269           | +56     |
| EC-12               | 367           | +48     |
| China               | 74            | +116    |
| Hong Kong           | 94            | +165    |
| Taiwan              | 125           | +120    |
| All other           | 427           | +33     |
|                     |               |         |

Jobs supported by U.S. goods exports to <u>Canada</u> reached a record 1.5 million in 1994 -- 21 percent of the total for all foreign markets, They also accounted for one-third of the rise in that total between 1986 and 1994. Reflecting the vital importance of the Canadian market to the U.S. economy, the jobs supported by goods exports in 1994 exceeded by a substantial margin the total supported by exports to all of the 12 countries that were European Union members that year.

Jobs supported by goods exports to key East Asian markets between 1986 and 1994 increased in importance relative to other markets. For example, over that period the jobs supported by exports to <u>China</u>, <u>Hong Kong</u> and <u>Taiwan</u> more than doubled in number and increased as a share of the total from 5 to 8 percent.

In contrast to the entire 1986-94 period, jobs supported by U.S. goods exports to <u>Japan</u> and the <u>European Union</u> were lower in 1994 than at their 1991 peaks, partly reflecting the negative effects of the economic recessions in those markets on their import demand. Jobs also edged down on goods exports to all other markets. The number for the Japanese market

dropped by 9 percent between 1991 and 1993 before partly recovering in 1994. The number for the European Union dropped by 14 percent between 1991 and 1994.

|                       |                |               | Foreign N     | Iarket         |              |       |       |
|-----------------------|----------------|---------------|---------------|----------------|--------------|-------|-------|
|                       | All            |               |               | Other<br>Latin |              |       |       |
|                       | <u>markets</u> | <u>Canada</u> | <u>Mexico</u> | <u>America</u> | <u>Japan</u> | EC-12 | Other |
| Increase in<br>Number | 2,451          | 420           | 479           | 196            | 269          | 367   | 720   |
| Percent               | 56%            | 40%           | 192%          | 64%            | 56%          | 48%   | 47%   |

<sup>\*</sup>Jobs supported by services exports are not available by individual national markets.

Table 2 Jobs in High-Technology Industries Supported by All Goods Exports, 1991-94 (in 1,000 of jobs)

| Employing industry              | <u>1991</u> | 1994         | Change        |
|---------------------------------|-------------|--------------|---------------|
| Total, direct and indirect      | 1,063.2     | <u>925.6</u> | <u>-137.6</u> |
| Of which                        |             |              |               |
| Electronic components           | 190.1       | 177.1        | -13.0         |
| Computing equipment             | 171.3       | 128.9        | -42.4         |
| Aircraft, engines, & parts      | 319.1       | 241.1        | -78.0         |
| Other                           | 382.7       | 378.5        | -4.2          |
| Direct (own exports):           |             |              |               |
| Total                           | 800.4       | 705.1        | -95.3         |
| of which:                       |             |              |               |
| Electronic components           | 124.5       | 121.5        | -3.0          |
| Computing equipment             | 141.7       | 107.8        | -33.9         |
| Aircraft, engines, & parts.     | 256.0       | 240.3        | -15.7         |
| Other                           | 278.2       | 235.5        | -42.7         |
| Indirect (other goods exports): |             |              |               |
| Total                           | 262.8       | 220.5        | -42.3         |
| of which:                       | <u>====</u> |              |               |
| Electronic components           | 65.6        | 55.6         | -10.0         |
| Computing equipment             | 29.6        | 21.1         | -8.5          |
| Aircraft, engines, & parts.     | 63.1        | 0.8          | -62.3         |
| Other                           | 104.5       | 143.0        | +38.5         |
| Oulei                           | 107.5       | 143.0        | 130.3         |
|                                 |             |              |               |